



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,475	04/20/2006	Takenori Tsuchiya	10517/314	6074
23838	7590	03/18/2009	EXAMINER	
KENYON & KENYON LLP 1500 K STREET N.W. SUITE 700 WASHINGTON, DC 20005			TOOM, IYAD F	
			ART UNIT	PAPER NUMBER
			3744	
			MAIL DATE	DELIVERY MODE
			03/18/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,475	TSUCHIYA, TAKENORI	
	Examiner	Art Unit	
	IYAD TOOM	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/17/2008, 04/20/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 18 is objected to because of the following informalities: "the storage mechanism is a secondary battery for running" (claim 18, line XXX) is unclear in context. It is presumed that the applicants intend to recite ~~the storage mechanism is a battery for running the vehicle~~. Appropriate correction is required.

Comment [C1]: You need to include the Bib data sheet in your e-Red folder. *On your Office Action Summary, you stated that all certified copies had been received. But on the Bib Data Sheet, you said that all priority conditions were not met.*

Deleted: Examiner suggests to change the claim language to "

Deleted: "

Claim Rejections - 35 USC § 102

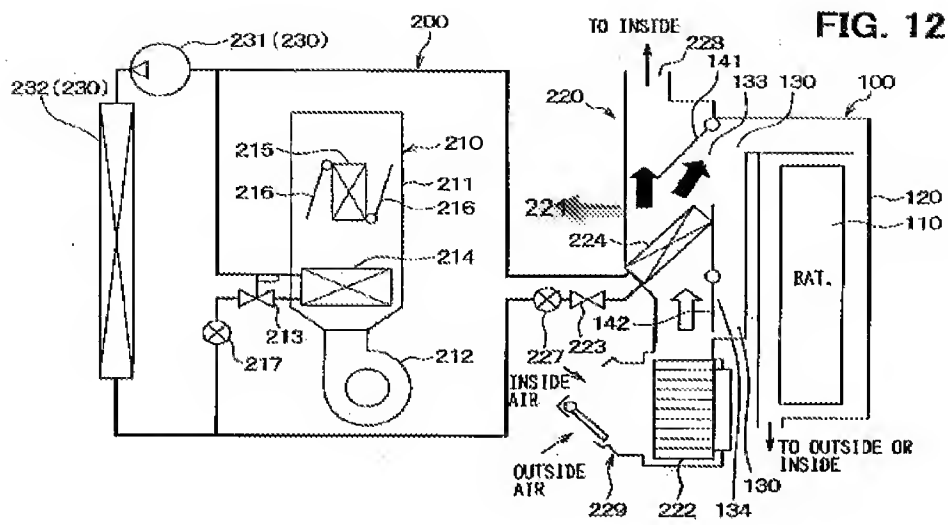
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-14 and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by

Inoue et al., US Publication No. 2003/0080714.



Examiner added arrow for clarification.

In regard to claim 1, Inoue discloses a temperature control system for a vehicle comprising:

As in fig. 12, a supply device 222 that supplies air for controlling a temperature to a storage mechanism 110 mounted in a vehicle; an inlet port 133 and 134 which is communicated with the supply device 222; and a changing device, (doors 141 and 142) that changes air to be supplied to the storage mechanism 110 by the supply device 222 between air whose heat has been exchanged with an air conditioning unit 220 in an air pipe 221 and air other than the air whose heat has been exchanged with the air conditioning unit, the changing device 141 and 142 being provided in the air pipe 221 between the supply device 222 and the inlet port 133 and 134. Inoue further teaches in fig. 12 and Para. 127, that of the 2 doors 141 and 142, changes air from cold air exchanged through evaporator 224 that flows to cool the storage mechanism 110 through inlet port 133 and air that has not been cooled in evaporator 224 and flows through port 134.

Deleted: ¶
Deleted: ,
Deleted: this device is made up of 2
Deleted: 142

Deleted: ,
Deleted: disclose
Deleted: an air changing device composed of
Deleted:
Deleted: that

In regard to claim 2, Inoue discloses in Para's. 82-86 and fig. 7 that in an inside air cooling mode, the cooling of the storage mechanism 110 is done by inside air introduced into the casing 241 from inside the passenger compartment of the vehicle, this air is not cooled by the evaporator 247.

In regard to claim 3, Inoue discloses in figs. 2-3 and 7 and Para's. 73-78 that control units 218 and 254 are used to control temperature of the vehicle, through measured value of the storage mechanism temperature sensor 253 and inside air temperature sensor 252

which represents the compartment temperature, in Para. 78 Inoue discloses that the measured value of the inside temperature 252 is supplied to control unit 254 through air conditioning control unit 218, and fig. 2 discloses in S12 and S13 that the temperature level of the battery 110 is used to control the opening degree of the changing device, 141 and 142. Control units 218 and 254 control the different components of the system.

Deleted: , changing device is normally known to be controlled by the controllers 254 and 21

Comment [C2]: You CANNOT use this phrase in a 102 rejection. "It is normally known" is perceived to be equivalent to an obvious statement, and this is a 102 rejection. Fix ALL instances of this phrase in the 102.

Deleted: 8.

In regard to claim to claim 6, Inoue discloses in in figs. 2-4 that, based on temperature level of the storage mechanism, the compressor will be turned on and cooling will be provided. As further disclosed in fig. 4, once the temperature level is the highest which is (level 3), the compressor is turned on and supply device 222 is run at high level, i.e. once the level of the storage mechanism's temperature increased the air conditioning unit is operated and air supplying device supplies the compartment 120 with cool air that has cold temperature, Para's 52-56. It is normally known that control units 218 and 254 control the different components of the temperature control system.

Deleted: ,

Deleted: a

Deleted: which is

Deleted:

Deleted: , it is noted that Inoue's system has the structure that is capable of performing the function of controlling the temperature of the storage compartment by supplying air whose temperature is colder and the limitation is a functional language that Inoue structure is capable of performing

Deleted: ,

In regard to claim 7, Inoue discloses in Para. 65 discloses that during winter, i.e. when the temperature is cold, the storage mechanism 110 is heated by warm air supplied in duct

Art Unit: 3744

130. Fig. 1 discloses a heater core 225 which provides the warm air to the battery 110 when needed.

Deleted: ,

Deleted: f

Deleted: shows

Deleted: further teaches

In regard to claim 8, Inoue discloses in figs. 2-3 that based on the temperature level of the storage mechanism 110, the changing device 141 and 142 is changed accordingly, it is normally known that the controlling the changing device 141 and 142 is executed through control units 218 and 254 which control the different components of the temperature control system.

Deleted: 0

Formatted: Highlight

Deleted: 0

In regard to claim 9, Inoue discloses in figs. 2-4 and Para's 87-88 that when the temperature level of the storage mechanism 110 is the highest the compressor is turned on and that air cooled by the evaporator will flow to cool the storage mechanism 110.

In regard to claims 10 and 13, Inoue discloses in figs. 2 (blocks S14, S18 and S20) and Para. 53 that based on the temperature level of the storage mechanism 110 the supply device 222 is changed accordingly, and, The controlling of the supply device 222 is executed through control units 218 and 254 which control the different components of the temperature control system.

Comment [C3]: Where exactly does it teach these limitations? See if you can find corresponding language in the spec.

Deleted: -3

Comment [C4]: This sounds like an obvious statement, but this is a 102 rejection... the system has 2 controllers 218 and 254 and they are shown in fig. 7 and they communicate with each other to control the different components of the vehicle including air conditioning.

Deleted: it is normally known that

Deleted: t

Deleted: .

In regard to claim 11, Inoue discloses in Para's 148-149 and fig. 13 that once the temperature of the storage mechanism 110 is greater than a predetermined temperature,

Art Unit: 3744

the supply device 222 is operated, ~~the~~ control units 218 and 254 control the different components of the system.

Deleted: ~~the control units 218 and 254~~**Deleted:** that**Formatted:** Highlight

In regard to claim 12, Inoue discloses in Para's 142-144 and fig. 13 that when the temperature of the storage mechanism 110 is below a predetermined temperature the supply device 222 is operated to provide air to the battery 110, ~~the~~ control units 218 and 254 control the different components of the temperature control system.

Formatted: Highlight**Deleted:** ~~the~~ that

In regard to claim 14, Inoue discloses in figs. 2-3 that based on the temperature level of the storage mechanism 110 the supply device 222 is changed accordingly, ~~controlling~~ the supply device 222 is executed through control units 218 and 254 which control the different components of the temperature control system.

Deleted: ~~controlling~~**Deleted:** that the**Formatted:** Highlight

In regard to claim 16, Inoue discloses in fig. 1 that the air supplied to the storage mechanism 110 is cooled by an evaporator 224.

In regard to claim 17, Inoue discloses in ~~Para. 37~~ that the storage mechanism 110 is located in the rear side of the vehicle, fig. 1 and Para. 39 disclose that air conditioning unit 220 is a rear air conditioning unit and ~~Para. 43~~ discloses that the supply device 222 is a blower.

Comment [C5]: What paragraph reaches this?**Formatted:** Highlight**Deleted:** in 43 t

Art Unit: 3744

Deleted: 6

Deleted: secondary

In regard to claim 18, Inoue discloses in Para. 37 discloses that the storage mechanism 110 is a battery, Para. 6 discloses that the battery 110 is used for driving the vehicle, i.e. running.

Deleted: ¶

Deleted: further discloses

Deleted: being

In regard to claim 19, Inoue discloses in fig. 1 and Para's. 39 and 41 having a first heater core 215, a first evaporator 214 which are part of a front air conditioning unit 210, a second evaporator 224, a second heater core 225 which are part of a rear air conditioning unit 220, Para. 58 discloses that the rear air conditioning unit 220 is closer to the battery 110 which is located in the rear of the vehicle. As illustrated in Fig. 1, Inoue further teaches that air, before supplied to the storage mechanism 110, is cooled by the evaporator 224, i.e. it's heat being exchanged with the evaporator 224.

Deleted: ¶

¶
¶

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue as applied to claim 1 above.

Deleted: ¶

In regard to claim 4, Inoue discloses in Para. 127 and fig. 12 that the changing device 141 and 142 changes air to be supplied to the storage mechanism 110 from cooled air which is cooled by evaporator 224 or an air that has not been cooled by the evaporator

Art Unit: 3744

224. Inoue, in Para's 82-86, further discloses that, when no cooling is needed, air can be supplied from the passenger compartment to cool the storage mechanism 110 which correspond to air other than air whose heat has been exchanged with the air conditioning unit 220.

Deleted: ,
Deleted: ,
Deleted: it is disclosed
Deleted: s

Inoue discloses in Para.39 that air conditioning unit 210 cools the front seat side of the vehicle and air conditioning unit 220 cools the rear seat side of the compartment, however, Inoue does not explicitly disclose a luggage compartment. It would have been obvious to a person of ordinary skill in the art at the time of the invention to include a luggage compartment in the rear side of the vehicle and to configure the air conditioning unit that cools the rear side to cool a luggage compartment which is normally located behind the rear seat side of the vehicle in order to keep the a uniform temperature in the rear side of the vehicle.

In regard to claim 5, Inoue discloses in figs. 2-3 and 7 and Para's. 73-78 that control units 218 and 254 are used to control temperature of the vehicle, through measured value of the storage mechanism temperature sensor 253 and inside air temperature sensor 252 which represents the compartment temperature, changing device is normally known to be controlled by the controllers 254 and 218. Inoue does not disclose that the control of changing device is based on a temperature of a luggage compartment. However, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the luggage compartment temperature control into the rear side

Deleted: but

compartment in order to accomplish a compact temperature control system and minimize space and reduce cost.

In regard to claim 15, Inoue discloses in Para. 51 and figs. 3-4 that the storage mechanism has level three in which the temperature of storage mechanism is high and level one of storage mechanism in which the temperature is low.

Inoue further discloses in Para. 65 that when the temperature of the storage mechanism is low in winter time, the heater core 225 which is part of air conditioning unit 220 is used to heat the battery to an appropriate temperature, the supply mechanism 222 will be used to deliver the air to the storage mechanism 110. Inoue further discloses in Para. 92 that when the temperature of the storage mechanism 110 is higher than the inside compartment temperature, the inside compartment is used to cool the storage

mechanism 110. Inoue does not disclose that case in which the storage compartment needs to be heated and that one of passenger or luggage compartment air is used to

heat the storage mechanism 110. Inoue discloses in fig. 8 that the temperatures of the outside air shown in block S130, the passenger compartment shown in block S150 are compared to the temperature of the storage mechanism 110 and if their temperature is lower, they can be used to cool the storage compartment 110 which is disclosed in blocks S140 and S120. Thus, it would have been obvious to a person of ordinary skill in

the art at the time of the invention to provide air from the passenger compartment to the storage mechanism 110 to heat the storage mechanism in order to save energy consumption by not operating the heater core 225 and therefore improve the efficiency of

Deleted: ,

Deleted: ,

Deleted: but

Deleted: in his method shown

Deleted: so

Art Unit: 3744

the temperature control system. Inoue also discloses in fig. 4 that when the temperature of the storage mechanism is a level one temperature, the supply device 222 is turned off, Inoue does not disclose that if the temperature of the storage mechanism is higher than a threshold temperature and there is no need for cooling or heating the control mechanism controls the supply device 222 so it is not operated but in winter time and when the temperature of the storage mechanism 110 is found to be higher than a predetermined temperature there would be no need to operate the supply device in order to save energy consumption of the vehicle.

Deleted: ¶

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No.4,352,321 by Fukui et al. directed towards electronic control method and apparatus for automobile.

US Patent No. 5,490,572 by Tajiri et al., directed towards a battery temperature control system in electronic automobile.

US Patent No. 7,013,659 by Yoshida et al., for battery cooling system for a vehicle.

US Patent No's 6,186,254 by Mufford et al; 6,662,891 by Misu et al.; 6,481,230 by Kimishia et al., and US Publication No. 2004/0163398 by Morishita et al., all directed to battery cooling system in a vehicle.

Art Unit: 3744

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IYAD TOOM whose telephone number is (571)270-7395. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules or Cheryl Tyler can be reached on 571-272-6681 or 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

2/24/2009

/I. T./

Examiner, Art Unit 3744